

27" Gas Dryer—Technical Information

MDG9700A *

- Due to possibility of personal injury or property damage, always contact an authorized technician for servicing or repair of this unit.
- Refer to Service Manual 16025911 for detailed installation, operating, testing, troubleshooting, and disassembly instructions.



CAUTION

All safety information must be followed as provided in Service Manual 16025911.



WARNING

To avoid risk of electrical shock, personal injury or death; disconnect power before servicing, unless testing requires power.

Model	MDG9700A*		
Power Source			
Voltage AC	120VAC		
Frequency	60 Hz		
Amperage	30 A		
Motor Horsepower	1/3		
Cabinet Dimensions			
Height	38"		
Width	27"		
Depth	30.75"		
Features			
Cycles	16		
Controls	LED		
Air Fluff	X		
Wrinkle Release	X		
Wrinkle Prevent	X		
Tumbler	Stainless		
End of Cycle Chime	X		
Drum Light	X		
Freshen Up Cycle	X		
Drying Rack	X		
Weight lbs.			
Uncrated	138		

Troubleshooting



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Will Not Run

Will not start or run:

- All wires are hooked up to their corresponding terminals.
- Dryer is plugged in.
- Blown fuse or circuit breaker.
- Door switch functional...door closed. Check for error code 3 (See Table for code definition).
- Start/Pause rotary selector dial functional.
- Control Board operational.
- Drive motor functional.
- Check motor winding resistance: 2.88ohms between pin #3 and 4, 3.5ohms between pin #4 and 5.

Motor runs/ tumbler will not turn:

- Belt off or broken/damaged.
- Idler tension spring too weak or stretched.
- Idler pulley jammed or stuck.

Runs a few minutes and then stops:

- Lint buildup around drive motor.
- Low voltage present.
- Blower impeller blocked in blower housing.
- Drive motor - start switch contacts stuck closed.

Blows fuses or trips circuit breaker:

- The amperage readings are at 240 volts. One line will be 24 amps and the other line will be 21 amps. The neutral line will be at 3 amps. If the above amperages are present, then the house wiring, fuse box or circuit breaker should be suspect.
- Shorted heating element to housing.
- Incorrect wiring or a wire shorting to ground.
- Drive motor winding shorting to ground.

Gas Models

- During ignition the dryer will draw X amps. With the burner ON, the dryer will draw X amps. If the dryer is drawing amperages above this, then the house wiring, fuse box or circuit breaker is suspected to be at fault.
- Igniter harness loose and shorted to base.
- Incorrect wiring or wire shorted to ground.
- Drive motor winding shorting to ground.

Will Not Dry

Will not heat (motor runs):

- Open heating element.
- Hi-Limit trips easily or is open.
- Regulating thermostat trips easily or is open.
- Membrane switch open.
- Check Thermistor.

Will Not Dry Gas Models

Poor Gas Ignition

When the dryer is operated on a heat setting, the igniter should be energized and burner shall fire within 45 seconds at 120 VAC. The failure of a component in this system will usually be indicated by one of three symptoms:

The igniter does not glow. If the igniter does not heat up, remove power and using an ohmmeter, check the following:

- Open flame sensor
- Open igniter
- Shorted booster coil
- Open wiring
- Bad motor switch (Neutral supply)
- No power from control (L1 supply)

Igniter glows - No gas ignition. If the igniter heats up but the main burner flame is not ignited, remove power and using an ohmmeter, check the following:

- Open secondary coil
- Open holding coil
- Open wire harness
- Stuck flame sensor (Stuck closed)

The gas is ignited but the flame goes out. If a normal ignition takes place and after a short while the flame goes out, check for the following:

- Radiant sensor contacts opening prematurely.
- Weak gas valve coil may open when stressed by higher temperatures.
- Weak Hi-Limit
- Poor venting
- Bad drum seals

Improper drying/clothes wrinkled/ rough texture/long dry time:

- Lint filter is not clean.
- Restriction in exhaust.
- Outside exhaust hood damper door stuck closed.
- Exhaust too long, too many elbows, flex ductwork installed.
- Poor intake air available for the dryer.
- Incorrect tumbler speed. Tumbler belt slipping.
- Blower impeller bound; check for foreign material in blower area.
- Customer overloading dryer.
- Check clothing labels for fabric content and cycle selected.
- Clothes too wet due to insufficient spin out by washer.

Troubleshooting



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Will Not Shut Off

- Check Membrane Pad.
- Check Electronic Control Board.
- Short in sensor circuit.

Troubleshooting the electronic control circuit:

- Check for miswiring of the electrical connector at the electronic control board.

Noisy and/Or Vibration

- **Thumping** Check for loose tumbler baffle, rear tumbler roller(s) worn or misaligned, out-of-round tumbler or high weld seam on tumbler.
- **Ticking** Check for loose wire harness or object caught in blower wheel area.
- **Scraping** Check for front or rear bulkhead felt seal out of position or worn tumbler front bearings.
- **Roaring** Check for blower wheel rubbing on blower housing or bad motor bearings.
- **Popping or squealing sound.** Check for a sticky or frayed belt.

Diagnostic Tests

The following table lists the various tests available while in the Service Mode. Before advancing to the next test, the current test running must be terminated.

Press the following keys to access:

Key Press	Special Test/Function
Wrinkle Prevent Displays "d"	Display list of diagnostic codes.
Then rotate the Cycle Selector Knob	To sequence thru the diagnostic and help codes.
Temperature Key	Display software revision number
Start/Pause	Start or pause cycle running but remain in diagnostic mode. Display the number of cycles ago the diagnostic code occurred.

Service Mode

This mode provides Service Personnel the ability to verify the operation of the dryer.

The Service Mode can be implemented at any time, including the middle of a dry cycle. While in the Service Mode, the Technician can start special diagnostic tests such as a System Check Mode, LED Switch/Check, Display Software version number and display diagnostic/help code listings.

Enter Service Mode:

Dryer must be on before Service Mode can be entered. Press **Chime** and **Temperature** Keys for 3 seconds, or until 3 beeps are heard. The machine will now be in Service Mode. Upon entry into Service Mode, the Sensor Bar Touch Data is to be displayed.

Exit Service Mode

Press the **OFF** key to exit Service Mode or repeat the **Chime** and **Temperature** sequence.

System Check Mode

While in Service Mode, pressing the **Time** and **Wrinkle Prevent** keys for 3 seconds, will put the dryer into the System Check mode and "in" will display. The following table lists the various functions based on the keys being pressed.

System Check Mode Table

Key Pressed:	Function Performed
Start/Pause rotary selector dial	Cycles the motor on/off.
Rotate the Cycle Selector Knob to Delicates	LED's and 7 segment display flash.
Rotate the Cycle Selector Knob to Sensor Dry	View current cycle temperature in Celsius.
Rotate the Cycle Selector Knob to Wrinkle Control	Segment display is "1" for sensor bar short, "0" for sensor bar open
Rotate the Cycle Selector Knob to Time Dry	View current cycle temperature in Fahrenheit.

Troubleshooting



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LED/Switch Check

While in Service Mode, pressing the **Chime** and **Wrinkle Prevent** keys for 3 seconds, will start a LED/Switch Test. To exit the test at any point, press the same keys again for 3 seconds or press the **OFF** key to exit Service Mode.

Perform the check by pressing the keys which toggle the LED's on and off.

All switch pads must be pressed within 5 minutes for this test to pass. **PR** will be displayed for five (5) seconds once all switch pads have been pressed and this test is completed. Following 10 seconds of inactivity at any point, the test will exit without any display. The **Power Off** switch pad must be pressed twice within thirty (30) seconds to cancel this test.

Switch	Action
Wrinkle Prevent	Press once
Chime	Press twice
Adjust Time	Press once
Time	Press four times
Temperature	Press three times
Dryness Level	Press four times
Selector Knob	Rotate 1 position
Start Pause	Press once
Off	Press once

Diagnostic Codes

The Diagnostic Codes are identified when the severity level of the abnormality detected is higher and service may be required.

When a problem with the dryer is detected a Diagnostic Code is assigned, and can be displayed. The Control Board will not log multiple same codes per cycle; however, it will log as many Diagnostics as possible for the machine to continue running.

Access Diagnostic Codes by entering the Service Mode and pressing **Wrinkle Prevent**. A **d** will be displayed. Rotate the Cycle Selector Knob in either direction to step through the list of codes one code at a time. Once an initial direction is selected by the user (either Clockwise or Counterclockwise), subsequent movements of the knob in the same direction will show older codes. If the user changes direction and turns the knob in the opposite direction, the more recent code will be displayed.

While a diagnostic code is displayed, if the **Start/Pause** button in the center of the Rotary Cycle Selector is pressed and held, the machine will display the number of cycles ago the diagnostic code occurred. When the **Start/Pause** button is released, the diagnostic code is again displayed.

Clearing Diagnostic Codes

To clear the diagnostic code list press the **Sensor Dry Level** and **Time** keypads together for 3 seconds while viewing the list. The cycle count for each diagnostic code will be reset to 0, but not the machine cycle count.

Diagnostic Codes

Code	Description	Trigger	Action Taken
1	Dryer Thermistor Short Sensed	The Thermistor resistance is very low.	<u>Check for:</u> <ul style="list-style-type: none">- Clogged lint screen.- Restricted vent system.- Check Thermistor resistance.
2	Thermistor Open Sensed	The Thermistor resistance is very high	<u>Check for:</u> <ul style="list-style-type: none">- Low ambient temperature in room (Below -22°F/-30°C).- Outside vent damper is stuck open in wintertime.- Loose or open wire terminals.- Check Thermistor resistance.
3	Door Circuit Failure	Invalid state for more than 256 milliseconds	<u>Check for:</u> <ul style="list-style-type: none">- Loose or open wire terminals in Door Sense circuit.
4	Possible motor transistor error	If either motor transistor is seen open or shorted during startup	<u>Check for:</u> <ul style="list-style-type: none">- Loose connections in motor circuit.- Run System Check Mode and check the motor relay function.- If relay functions, disregard the diagnostic code.- If relay does not function, replace machine control board.

Troubleshooting



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Code	Description	Trigger	Action Taken
8	Stuck Key	A key is sensed to be pressed more than 75 seconds, the key shall be assumed to be stuck.	Run membrane pad check and replace console w/membrane pad if necessary.
10	No Wet Clothes	Sensor bar detects no wet clothes while a Sensor Dry Cycle	Check for: - Running dryer with no wet clothes in sensor dry cycle

Display Fault/Error Codes







Disp	Description	Trigger	Action Taken
tS	Dryer Thermistor Short Sensed	The Thermistor resistance is very low.	Check for: - Clogged lint screen. - Restricted vent system. - Check Thermistor resistance. - Check for diagnostic code 1
do	Door Open	Running the dryer with door open	Check for: - Close the door, and run the dryer - Loose or open wire terminals in Door Sense circuit. - Check for diagnostic code 3
FE	Power source frequency error	Invalid power source frequency	Check for: - Not using regular power source frequency - Invalid power frequency sense circuit
dC	Door Circuit Failure	Invalid state for more than 256 milliseconds	Check for: - Loose or open wire terminals in Door Sense circuit. - Check for diagnostic code 3
hE	Heater Error	Invalid heating temperature in running the dryer	Check for: - Restricted vent system. - Check Thermistor resistance.

Component Testing



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Illustration	Component	Test Procedure	Results
	Thermistor	Unplug harness connector and test from wire insertion side. Pin #2 and Pin #6 of CN6	10k ohms @ 77F NTC
	Door Switch	Unplug connectors and test switch terminals. Door open terminals COM to NC/ 1 to 3 Door open terminals COM to NO/1 to 2 Door closed terminals COM to NC/ 1 to 3 Door closed terminals COM to NO/ 1 to 2	Infinity Less than 1 ohm Infinity Less than 1 ohm
	Light	Unplug connectors and test switch terminals. Check across terminals	80 to 100 ohms
	Belt Switch	Unplug connectors and test switch terminals. Check across terminals switch closed Check across terminals switch open	Less than 1 ohm Infinity
	Motor	Unplug harness connector and test motor circuits. Pin #4 and Pin #5 (Windings) Pin #1 and Pin #2 (Centrifugal switch)	2 ohms Open
	TH1 Thermostat 85 C/185 F 25A	Unplug connectors and test Thermostat terminals. Check across terminals	Less than 1 ohm
	Heater Element	Unplug connectors and test Heater terminals	10 ohms
	Sensor Bars	Unplug harness connector and test from wire insertion side. Pin #4 to Pin #5 of CN6	Infinity (Dry load) 190 ohms \pm 10% (Wet load)
	Radiant Sensor	Unplug connectors and test sensor terminals.	Closed

Component Testing



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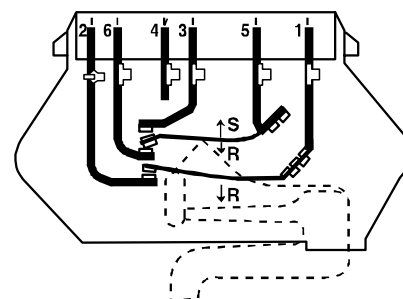
Illustration	Component	Test Procedure	Results
	TH2 Thermostat 230F/110C	Unplug connectors and test Thermostat terminals.	Less than 1 ohm
	Gas Valve	Unplug connectors and test valve terminals. Check across terminals #1 and #3 (Booster Coil). Check across terminals #1 and #2 (Holding Coil). Check across terminals #2 and #3 (Both coils in series). Check across terminals #4 and #5 (Secondary Coil).	550 ohms 1350 ohms 1900 ohms 1300 ohms

Motor Contacts

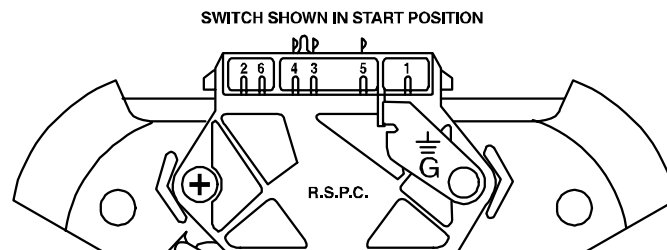
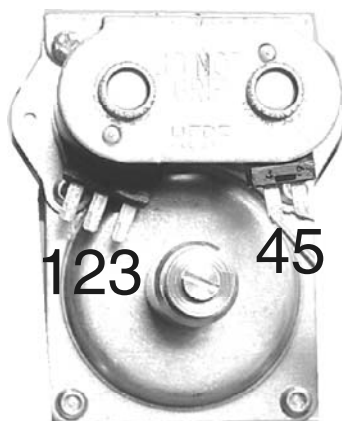
Function	1M	2M	3M	5M	6M
Start			●	●	
Run	●	●		●	●

● = Contact closed

Centrifugal Switch (Motor)



Gas Valve



Wiring Diagram



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GAS DRYER WIRING DIAGRAM

